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CONTRIBUTIONS FROM THE CRYPTOGAMIC LABORATORY OF HARVARD UNIVERSITY.—LXII.

PRELIMINARY DIAGNOSES OF NEW SPECIES OF LABOULBENIACEAE.—VI.

By Roland Thaxter.

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With the present contribution, which comprises such new forms of Laboulbeniaceae as have accumulated during the past two years, the writer proposes to close the series of preliminary diagnoses which he has issued from time to time since 1899. With these additions the total number described becomes approximately five hundred, including about forty-eight genera; and plates illustrating all the forms not included in the writer's "Monograph," comprising not far from one thousand figures, are now completed. It is a matter of regret, however, that the publication of these illustrations must necessarily be still longer deferred, owing to the fact that the writer proposes to be absent during the coming year, and will be unable to give this matter his attention until after his return.

Dimeromyces Labiae nov. sp.

Male individual. Receptacle consisting normally of three superposed cells, the basal projecting laterally to form the base of the lowest antheridium, bearing distally a two-celled appendage distinguished by a basal blackish septum; the two upper cells of the receptacle producing two, rarely three, antheridia: the latter short and stout, the efferent region containing the several tubes rather abruptly distinguished from the venter, as well as from the common efferent tube, which curves outward somewhat abruptly. Total length to tip of appendage, including foot, 50 μ. Appendage 25 μ. Antheridium 16–18 × 6–7 μ.

Female individual. Subhyaline, or straw-colored, consisting of an irregular axis of three or four superposed cells, terminated by a simple, usually two-celled, appendage distinguished by a blackish septum; the subbasal cell bearing a broad blunt bicellular upcurved appendage or protrusion, which subtends either the single perithecium, or a several-celled appendage similar to the primary one. Perithecium solitary, colorless, somewhat elongate, tapering but slightly to the more or less abruptly distinguished rather broad somewhat flattened tip. Total length to tip of perithecium 65–75 μ. Perithecium 50–60 × 12 μ. Spores about 18 × 12 μ.

On the elytra of *Labia minor* Burm., Cambridge, Mass.

Dimeromyces minutissimus nov. sp.

Male individual. Receptacle consisting of three cells, the basal externally suffused with blackish-brown, and projecting beneath the base of the antheridium; the subbasal giving rise to the solitary antheridium; while the distal is separated by a blackened septum from a two-celled erect rigid distally spinose appendage. Venter of antheridium small, tapering gradually to the stout outcurved neck. Total length, including foot, 32 μ. Antheridium 16 × 5 μ.

Female individual. Receptacle very irregularly formed, externally blackened above the large foot; consisting of several irregularly superposed cells, the subbasal giving rise to a two-celled prominence subtending a blackish tapering appendage, which projects at right angles to the colorless primary appendage; the latter two-celled, distinguished by a blackish septum, and often subtended by a similar appendage from the same (distal) cell of the receptacle. The single perithecium rather short and broad, tapering slightly to the more or less distinctly differentiated somewhat truncate tip. Length to tip of perithecium 50 μ. Longest appendage 40–50 μ. Perithecium 34 × 10 μ.

On the inferior surface of the rhabdites of *Labia minor* Burm., Cambridge, Mass.

These two species may prove merely variations of the same form due to the differences in their position of growth, and are only provisionally separated.

Monoicomyces Leptochiri nov. sp.

Receptacle consisting of a main axis of superposed cells, usually long and slender, normally simple, sometimes once to several times branched, the whole structure apparently a branch from the subbasal cell of a small primary receptacle: the axis somewhat similar to that of Rhachomyces, consisting of a series of superposed cells, variable in number (about twelve to twenty-five), each of which bears on one side, so as to form a unilateral series, a pair of simple cylindrical few-celled appendages, which become better developed from below upward; arising side by side, closely associated and appressed, characteristically blackened at the base, which is usually indistinguishable from the small blackened cell from which they arise, and which is obliquely separated just below each septum of the axis: this opaque region in the lower cells of the axis usually projecting characteristically like a notch or tooth: the cells of the axis near its base deeply suffused or opaque; the suffusion becoming, from below upward, gradually associated with the septum only: the axis in some specimens nearly hyaline throughout, with blackish-brown suffusions at or about the septa. The paired appendages replaced somewhat irregularly below the perithecium by antheridia of small size, resembling the appendages in general appearance when viewed laterally, and usually terminated by two hyaline simple appendages of no great length. Perithecium solitary, terminating the main axis, or its secondary axes; faintly yellowish, straight, nearly symmetrical, rather abruptly narrower at the tip, the apex rather small, symmetrical, truncate. Total length to tip of perithecium 250–800 μ, the axis about 18–20 μ in diameter. Perithecium 70–90 × 18–25 μ. Longer appendages sometimes 50 μ.

On all parts of several species of *Leptochirus*, Java.

Monoicomyces similis nov. sp.

Pale straw-colored. Receptacle consisting of two superposed cells, terminated by a straight tapering simple several-celled appendage, sometimes reaching to the tips of the perithecia, and distinguished by a black basal septum. The subbasal cell of the receptacle also giving rise to a pair of normally symmetrical branches, consisting of a single basal cell, from which arises the stalk-cell of the perithecium on the inner, and that of the antheridium on the outer side. Stalk-cell of the perithecium narrowed at the base, the narrow portion red-brown, expanding above and hyaline. Perithecium somewhat asymmetrical or bent, deeper straw-colored, tapering gradually to the blunt tip, which is hardly distinguished. Antheridium of the normal type, the distal appendages usually two, one sometimes exceeding the tip of the perithecium. Total length to tip of perithecium 150–200 μ. Perithecium 90–110 × 30 μ, the stalk-cell 35 × 46 μ. Spores about 35 × 4 μ.

On the abdomen of *Homalota* sp., infesting species of *Lactarius*, Kittery Point, Maine.

Eucantharomyces Madagascarensis nov. sp.

Rather pale straw-colored. Perithecium large, subcylindrical, tapering very slightly distally and basally, the rounded tip rather abruptly distinguished, and subtended by more or less distinct elevations; the inner lip-cell short, prominently rounded, but not extending beyond the other lip-cells and rendering the apex subsymmetrical; the base not differentiated from the body of the receptacle, the cells relatively short, not extending down beside the stalk-cell, from which they are rather clearly distinguished: stalk-cell elongate, tapering below. Basal and subbasal cells of the receptacle of about equal length, the former about half as broad as the latter, and extending to the base of the stalk-cell of the perithecium. Basal cell of the appendage somewhat larger than the subbasal, slightly overlapping the subbasal cell of the receptacle, the marginal cell not prominent below the discharge tube which is curved outward, sometimes horizontally; the antheridial cells in three rows of seven, seven, and five cells respectively. Spores about 60 × 4 μ. Perithecium, including basal cells, 385 × 60–70 μ, the stalk-cell 275–290 × 40–55 μ. Receptacle 165 × 35-45 μ. Antheridium, total length 130–150 × 30–35 μ, above basal cell 75 μ.

On elytra of *Callida* sp., Madagascar; Hope Collection, No. 273.

Chitonomyces dentiferus nov. sp.

Pale straw-colored. Receptacle nearly straight, the foot large, the basal cell about twice as long as broad, but slightly broader distally, the subbasal cell broader than long, distinguished above and below by a more or less distinct constriction, the lower marginal cell longer than the next above it, the terminal cell subcylindrical with broadly rounded apex bent slightly inward. Perithecium distally curved inward above a suberect, tooth-like, unicellular appendage, which is curved slightly outward, and originates above a rounded more deeply colored prominence, which subtends it and lies nearly opposite the extremity of the distal appendiculate cell of the receptacle, which it about equals in length. The tip of the perithecium tapering (somewhat as in *C. appendiculatus*), the lip-cells slender and somewhat elongate, with rounded extremities. Total length to tip of perithecium 90–110 × 18–20 μ. Perithecium about 65 × 18 μ. Basal portion of receptacle about 35 μ. Spores about 28 × 3 μ.

On the margin of the left elytron of *Laccophilus* sp., near the base, Lake Eustis, Eustis, Florida.

Chitonomyces Javanicus nov. sp.

Foot relatively small. Basal cell of the receptacle small and narrow, its basal half or more suffused with dirty blackish-brown, above hyaline; subbasal cell longer than the basal, and of nearly the same diameter throughout; the three cells above it subtriangular, about equal in size, darker straw-colored, or pale amber-brown: the lower marginal cell of the distal portion of the receptacle narrow, clean cut, darker amber-colored; the lower appendiculate cell above it hyaline, small; the two remaining cells above and external to it, forming an opaque appendage shaped like a knife-blade, its tip rounded outward from the inner side to an external blunt apiculus. Perithecium suffused below with pale amber-brown, long and slender, narrower opposite the insertion of the lower appendage, expanding slightly above it, the small hyaline apex curved inward and subtended externally by an erect, clear, dark amber-brown projection, hardly or not at all exceeding it; and on the inner side by a larger, broader, less deeply colored, spreading cell, which is curved toward the receptacle, the blackened portion of which projects about half its length above it. Total length to tip of perithecium 165–185 μ, to the tip of the black prolongation of the receptacle 180–200 μ, greatest width 22–25 μ. Perithecium 90–110 × 16 μ. Basal portion of the receptacle 75 μ, including the slender foot.

On the margin of the left elytron of *Laccophilus* sp., Java.

Chitonomyces spinosus nov. sp.

Basal and subbasal cells of the receptacle subequal, the latter somewhat broader; the lower marginal cell relatively short and broad; the lower appendiculate cell relatively large; the upper marginal cell bearing distally a long unicellular amber-brown outgrowth, about half the total length of the individual, projecting upward and outward at an angle of about 45°, with a slight terminal twist, and subtended by a prominent bulge of the cell which bears it: the distal appendiculate cell relatively large and broad. Perithecium rather stout, the transverse limits of the wall-cells indicated externally by more or less pronounced elevations, the blunt tip somewhat abruptly distinguished above the nearly straight inner margin. Total length to tip of perithecium, including foot, 130 μ, greatest width 33 μ. Marginal appendage 45–60 μ. Spores about 28 × 2.5 μ. Perithecium 75×20 μ.

On the left posterior leg of *Laccophilus* sp., Java.

Distichomyces nov. gen.

Receptacle consisting of a basal and subbasal cell surmounted by two parallel series of cells of indefinite number, any of which may bear either a sterile appendage or an antheridium externally, one of the series ending in a perithecium, the other terminated by the primary appendage. Appendages of the same type as those of Rickia and Peyritschiella. Antheridia at maturity terminal on a unicellular branch, becoming quite free in a compact group.

A genus very closely resembling Rickia, but differing in its biseriate receptacle, and its free simple antheridia, the terminal cell which in other genera of the Peyritschiellae persists as a common delivery tube, becoming apparently completely disorganized, although the early stages of development have not been seen. The primary appendage is borne on a bicellular base, the two series of cells forming the main axis of the receptacle resulting from the activities of two cells immediately below this base; one representing an original branch and finally producing the perithecium which terminates this "perithecial axis"; the other being an intercalary cell, so that the development of this half of the axis, which may be called the "primary axis," is in a sense trichothallic.

Distichomyces Leptochiri nov. sp.

Slender and considerably elongated, or sometimes short and stout: the primary axis consisting of from twelve to thirty cells, more or less, above the subbasal cell of the receptacle, somewhat proliferous distally beyond the base of the primary appendage, the small cells thus formed, one or two of them appendiculate, extending to the free tip of the perithecium; the perithecial axis consisting of from six to twenty-six cells, more or less; the perithecium slightly broader, but not distinguished from the axis, wholly united on its inner side to the primary axis, more or less strongly curved outward to its blunt subtruncate free tip. Appendages as in Peyritschiella, hyaline, rather slender, very variably developed, borne on a small triangular cell, separated distally and externally from the cells of the axis; sometimes numerous, often few and scattered, or almost wanting except distally, where all the cells of the primary axis are usually appendiculate. Antheridial branches borne like the sterile branches, irregular in position and number, sometimes even absent, usually confined to the lower half of the axis, more often near the base, consisting of a short stalk-cell bearing terminally a compact erect group of flask-shaped antheridia, usually four or five in number, their short broad necks at first closely approximated or coherent, divergent only after full maturity. Perithecium 50–55 × 15–20 μ. Longer sterile appendages 75 × 6 μ. Antheridial branch, including antheridia, 18 μ. Total length, longer 475 × 10 μ, shorter and stouter 125 × 36 μ. Secondary perithecia may develop from cells of either axis if the primary perithecium does not develop or is destroyed.

On the head, antennae and under surface of *Leptochirus* sp., Java; Rouyer, No. 1403.

Herpomyces Anaplectae nov. sp.

Male individual consisting of four superposed cells, the two or three upper ones becoming variably branched, and bearing a variable number of antheridia on the branchlets; the subbasal cell apparently in some cases producing one or two small secondary receptacles, each of which bears an irregular tuft of antheridia. Total length, including antheridia, 35–50 μ. Antheridia 24 × 2 μ.

Female individual hyaline. Primary receptacle mostly 4-celled, the distal cell at first long, conical, mucronate, becoming more or less collapsed and irregular at maturity; the subbasal giving rise to a branch from which are formed a pair of small secondary receptacles, each producing a single perithecium; the two symmetrically placed, and symmetrically curved away from the axis of the primary receptacle. Perithecium long, slender, tapering from below the middle to its attenuated apex; the tranverse boundaries of the wall-cells often indicated in the middle region by more or less distinct elevations, the apex unmodified, blunt. Primary receptacle 25 × 3 μ. Secondary receptacle 16 × 13 μ. Perithecium 80–90 × 16 μ. Spores about 18 × 2 μ.

On the antennae of a species of *Anaplecta* allied to *A. Dorhniana* Sauss.-Zehntn., collected under stones along the margin of a stream near Caracas, Venezuela, by Dr. A. F. Blakeslee.

Herpomyces Nyctoborae nov. sp.

Male individual. Axis consisting of five or six cells, the basal somewhat elongate, the rest short and somewhat rounded, the terminal one abruptly apiculate; the distal cells producing branches which in turn branch three to four times, the ultimate branchlets bearing the antheridia terminally in groups, the whole forming a dense tuft. Axis about 54 × 10 μ, the total length to the tips of the antheridia about 100 μ. Antheridia 20 × 3 μ.

Female individual. Colorless, the primary receptacle consisting of four or five cells, the terminal one short and apiculate; the subbasal (perhaps others also?) giving rise to branches which produce a variable number of secondary receptacles arranged with the younger behind the older as in *H. Paranensis.* The secondary receptacles much as in *H. Paranensis*, the first formed broadest. Perithecium long and slender, tapering, especially above the middle; the stalk-cells flattened, so that the perithecium is almost sessile on the receptacle; the ascigerous portion often abruptly somewhat narrower than the base, the fourth lateral external wall-cell bearing a long curved attenuated wholly free spine-like cell, which extends just beyond a subterminal short distally incurved sharp spinous process, which subtends, and is nearly twice as long as, the free curved tip of the perithecium: the fourth anterior wall-cell also producing a long curved spinous process, slightly shorter than the lateral one, or more divergent. Secondary receptacles 65 × 45–50 μ. Base and stalk-cells of perithecium 30–35 × 15–18 μ, the ascigerous part to tip of longest spine 150–165 μ: width near base 20–25 μ, below lower spine 10–12 μ; external spine 50 μ, terminal spine 12 μ.

On antennae of *Nyctobora latipennis*, Texas; Scudder Collection, No. 1383.

Herpomyces Phyllodromiae nov. sp.

Male individual consisting of four superposed cells: producing distally one or several antheridia directly. Total length about 30 μ.

Female individual. Colorless, the primary receptacle minute, consisting of four subequal cells: the subbasal sending down a branch which furcates to produce a pair of small secondary receptacles, consisting of only two or three vertically elongated cells and each bearing a solitary perithecium. Perithecia more or less symmetrically placed, the ascigerous portion slightly inflated, tapering above to the somewhat slender distal portion, which bends abruptly outward from the substratum, diverging but slightly; the tip subtended by a blunt pointed spine-like projection, directed nearly at right angles to the axis of the free tip. Primary receptacle about 25 μ long. Secondary receptacle 20 × 10 μ. Perithecium, to tip of process, about 80–100 × 15–20 μ.

On antennae of *Phyllodromia* sp., Abyssinia; Scudder Collection, No. 1381.

Herpomyces Platyzosteriae nov. sp.

Male individual consisting of four superposed cells bearing distally one or several antheridia. Total length to tip of antheridia about 40 μ.

Female individual, colorless. Primary receptacle consisting of four superposed cells, the terminal one acuminate; the subbasal giving rise to a branch which produces a single secondary receptacle, made up of a vertical series of cells, obliquely superposed, and variable in number, giving rise above to a solitary perithecium. Perithecium erect, bent inward toward the seta on which the individual grows, the ascigerous portion hardly, or not at all, inflated; the distal portion curved outward, tapering to the pointed apex, which is subtended on the inner side by a stout, bluntly rounded projection about as long as the free apex of the perithecium which extends outward at right angles from its base. Total length to tip of subterminal projection 160–225 μ. Perithecium 150 × 33 μ, its terminal process 10 × 3.5 μ.

On the antennal setae of *Platyzosteria ingens* Scud., Mexico; Scudder Collection, No. 1384.

Acompsomyces brunneolus nov. sp.

Colorless, the tip of the perithecium and its posterior margin suffused with brown, the suffusion extending to the base of and including the appendage. Receptacle short, the basal cell hyaline, relatively large, slightly inflated above, tapering to the small foot; the subbasal cell very small, twice as broad as long; the basal cell of the appendage deeply suffused with blackish brown, especially externally; relatively small and short, the rest of the appendage much as in the other species, somewhat narrow and suffused with brown. Stalk-cell of the perithecium short, slightly longer than broad, the perithecium relatively large and stout, nearly straight, the inner margin nearly straight, and suffused with brown, the outer bent abruptly inward below the tip, which is brown, short, stout, well differentiated, broadly truncate; the lip-cells rising in a truncate conical apiculus subtended by the four clearly distinguished broad subterminal wall-cells. Total length to tip of perithecium 125 μ. Perithecium 80 × 20 μ, the stalk-cell 12 × 10 μ. Receptacle 28 × 12 μ. Appendage to tip of spine 45 × 10 μ, the basal cell 10 μ long.

Near the base of the right elytron of *Corticaria* sp., Kittery Point, Maine.

Stigmatomyces Elachipterae nov. sp.

Receptacle hyaline, the basal and subbasal cells of nearly equal length, the former more or less distinctly inflated distally in the region of a partial septum, above which it may be somewhat faintly marked by transverse lines; the lower portion having its walls thickened from above downward in a characteristically laminate fashion. Stalk-cell of the appendage abruptly distinguished from its much narrower basal cell, which becomes considerably broader distally; a rather large cell being separated from it terminally, bearing three antheridia: above it the appendage consists of three cells, the upper very small, bearing in all normally five antheridia, including the spinose terminal one. Venter of the perithecium pale amber-brown; the wall-cells bulging conspicuously throughout their length, and rather abruptly distinguished above the neck, usually stout and somewhat shorter than the venter; the tip asymmetrical, and slightly oblique, with projecting bluntly pointed apex. Perithecium, venter 55–65 × 30 μ, neck 50 × 16–20 μ. Appendage 80–90 μ, the stalk-cell 15–20 μ. Receptacle about 65 × 18 μ. Spores 40 × 3.5 μ.

On *Elachiptera longula* Loew., Intervale, New Hampshire.

Stigmatomyces micrandrus nov. sp.

Venter of the perithecium, together with its basal cells and the stalk-cells of the appendage, dark amber-brown, symmetrically oval, or typically subconical; at maturity roughened by numerous transverse, not very prominent, ridges; the neck usually longer than the venter, slender, nearly cylindrical above its slightly spreading base, and usually more or less distinctly curved; the tip slightly narrower, and subtended by slight elevations, distally asymmetrical, somewhat oblique, the lip-cells prominent, somewhat pointed and divergent, subtending a pointed prominent apex. Basal cells of the perithecium small, subequal, and characteristically prominent. Receptacle typically rather short and stout, the two cells subequal, or the subbasal cell more or less elongate, finally more or less distinctly marked by transverse striations. Stalk-cell of the appendage rather short, more or less prominent: the basal cell abruptly narrower, squarish, brown, bearing a single antheridium; the rest of the appendage short and stout, hyaline, consisting of two superposed cells, each bearing two antheridia, surmounted by the single terminal spinose antheridium. Spores 45 × 4 μ. Perithecium, venter 72–80 × 50–60 μ, the neck 140–150 × 16–18 μ. Appendage above stalk-cell 35–40 μ; the stalk-cell 20 μ. Receptacle 90–110 × 30 μ. Total length to tip of perithecium 275–325 μ.

On the superior surface of the abdomen of a small blackish fly, Ralum, New Pomerania; Berlin Museum, No. 1284.

Stigmatomyces pauperculus nov. sp.

Short and stout, dark amber-brown, except the hyaline receptacle, and the antheridial portion of the appendage. Venter of perithecium short, stout, inflated; more or less distinctly granular, abruptly distinguished from the neck, which is slightly inflated above the middle, distally curved, and slightly tapering; the apex somewhat asymmetrical and blunt, the lip-cells forming inconspicuous papillae. Receptacle hyaline, rather short, the cells subequal, abruptly distinguished from the parts above. Stalk-cell of the appendage short and prominent, separated from the darker basal cell by an abrupt constriction; the rest of the appendage very broad, short, hyaline, curved inward; consisting of three superposed cells and the terminal antheridium, the total number of antheridia eight (possibly nine), scarcely more than their small necks free. Total length to tip of perithecium 165–175 μ. Venter of perithecium 40–45 × 35–38 μ, the neck 50 × 16 μ. Appendage, including basal cell (16–20 μ), 58–65 × 15 μ. Spores 32 × 3 μ.

On legs of a small dark fly with white inferior abdomen, Ralum, New Pomerania; Berlin Museum, No. 1291.

Stigmatomyces Sarcophagae nov. sp.

Normally long and slender. Color nearly uniform dull amber-brown, except the hyaline receptacle and the appendage above its basal cell. Venter of perithecium minutely transversely granular-striate, rather narrow, straight, the wall-cells prominent and slightly spiral; the neck rather abruptly distinguished, the cells more or less spirally disposed, a rather distinct subterminal enlargement, above which the subconical tip ends in a blunt slightly oblique apex, the paired posterior lip-cells slightly prominent; the basal cells small, somewhat prominent; the stalk-cell relatively large. The receptacle normally very elongate, hyaline, nearly isodiametric; the subbasal cell much longer than the basal. The appendage long, slender, recurved; its stalk-cell about two or three times as long as broad; the basal cell more than twice as long as broad, the portion above it consisting of five superposed cells, and a terminal antheridium; the total number of antheridia normally nine. Spores about 35 × 4 μ. Venter of perithecium 75–90 × 35–42 μ, the neck 150 × 18–22 μ. Appendage, to edge of curvature, 110 μ, the stalk-cell about 35 μ, the basal cell 18–20 μ. Receptacle 200–325 × 30 μ. Total length of larger individuals 600 μ.

Growing in tufts on the abdomen of *Sarcophaga* sp., Island of Margarita, Venezuela; Dr. A. F. Blakeslee.

Stigmatomyces Venezuelae nov. sp.

Perithecium slender, curved throughout, the venter pale amber-brown, hyaline externally, not distinguished from the neck on the inner side; the outer wall-cells bulging more or less conspicuously; the neck tapering slightly, the tip blunt, and unmodified; the basal and stalk-cells hyaline, distinguished from the venter by an abrupt external constriction. Cells of the receptacle hyaline, subequal, the basal bulging distally, below the subbasal, to which it is thus asymmetrically adjusted. Stalk-cell of the appendage tinged with amber-brown, more than twice as long as broad, abruptly distinguished from the lower part of the basal cell, which is small and brown: the appendage proper small, hyaline, withering at maturity, except the lower part of the basal cell; consisting apparently of about three cells producing about four nearly free antheridia. Perithecia 95 × 30 μ. Receptacle 90 × 14 μ. Appendage 45 μ, exclusive of stalk-cell, which is 22 μ long.

Growing at tip of abdomen of *Limosina* sp., Island of Margarita, Venezuela; Dr. A. F. Blakeslee.

Rhachomyces Javanicus nov. sp.

Perithecium straight, symmetrical, tapering slightly distally, translucent, brown, the tip opaque blackish brown, the apex hyaline and blunt, the whole surrounded and more or less hidden up to the tip by the appendages. Receptacle rather long and slender, the main axis normally consisting of more than twenty cells which are clearly distinguishable, more or less suffused with blackish brown, less so toward the base, more or less hyaline at and obliquely below the septa; the appendiculate cells giving rise to a dense series of similar black subequal appendages, their inner edges somewhat hyaline, with slightly upturned and enlarged bluntly pointed hyaline tips, more numerous distally and forming a dense tuft below and around the perithecium which they conceal, except for its projecting tip. Perithecium 95–110 × 35–40 μ. Receptacle 275–350 μ by about 18 μ. Total length 350–460 μ. Appendages longer, about 90–100 μ.

On legs of a small Harpaloid (?) beetle brought from Buitenzorg, Java, by Dr. H. M. Richards.

Rhachomyces Aphanopsis nov. sp.

Perithecium but slightly inflated, hyaline, straight, the tip blunt symmetrical. Receptacle variable, hyaline; the main axis consisting of about ten to fifteen hyaline cells, the two lowest larger and suffused with brown, the rest broader than long, and separated by somewhat oblique septa; the hyaline appendiculate cells relatively large, and not concealed by the appendages, which are rich black brown, the lower ones, when unbroken, extending upward far beyond the tip of the perithecium and curved toward it: those arising about its base, and even below it from the inner cells of the appendiculate series, unlike the rest, erect, straight, consisting of a paler basal part, five to six septate, with constrictions at the septa, and a distal unicellular more or less elongate portion. Perithecium (not fully matured) about 85 × 25 μ. Receptacle 75–165 × 15–18 μ. The longest appendages about 300–350 μ.

On the elytra of *Aphanops cerberus,* nearly always immature, Ariège, France; Sharp Collection, Type, No. 1142; Berlin Museum, No. 877; Paris Museum, No. 193.

Laboulbenia bilabiata nov. sp.

Form stout, the basal cell of the receptacle nearly hyaline, the subbasal becoming amber-yellow, the parts above it clear amber-brown. Perithecium stout, nearly symmetrical, tapering to the broad tip, the anterior lip-cells modified subterminally to form a closely approximated pair of broadly rounded projections, which are subtended on the inner side by the slightly prominent rounded apex, which is in turn subtended by a blackish suffusion of no great size. Receptacle normal, rather short and stout, the basal and subbasal cells slightly prominent anteriorly, of nearly equal length, the walls very thick and striate. Appendages normal, the outer consisting of a black-brown basal cell, twice as long as broad, bearing distally the two divergent branches, which are mostly once branched (antero-posteriorly), all the lower cells suffused with brown, becoming hyaline toward the tips: the inner appendage consisting of a basal cell, slightly shorter than that of the outer, paler brown, bearing the normal branch on either side; the branchlets more or less elongate, or bearing loose tufts of antheridia. Perithecium 240 × 75 μ, including the terminal projections, which measure 25 × 22 μ. Receptacle 225–250 μ. Total length 450 × 115 μ. Appendage 200–300 μ.

On *Brachinus armiger* Dej., Cape of Good Hope; Berlin Museum, No. 982.

Laboulbenia olivacea nov. sp.

Perithecium nearly free, broader distally, olivaceous brown, paler and subhyaline distally on the inner side; the inner margin bulging characteristically above and curved abruptly outward to the tip, which forms a flat blunt hyaline papilla, turned outward and hardly distinguished from the body of the perithecium, and wholly subtended by a wide blackish suffusion, the outer margin forming a slight curvature continuous with that of the receptacle. Receptacle relatively small, the basal cell small, narrow, and quite hyaline, except distally, where it is partly involved in the dark olive-brown suffusion of the rest of the receptacle, which is coarsely punctate in the region of cells II and III, becoming wholly opaque and indistinguishable from the base of the perithecium, with the exception of cell V and a corresponding cell of about equal size which lies external to it, being cut off distally from cell IV, the receptacle being abnormal in this respect. These two cells hyaline or translucent, the whole anterior margin, from the base of cell II to the tip of the perithecium, forming a nearly symmetrical continuous curvature. Outer appendage consisting of a small slightly prominent basal cell, slightly constricted above, where it is separated by a blackish septum from a hyaline erect slender nearly straight distal portion or branch: the basal cell of the inner appendage somewhat smaller, giving rise to several erect branches, like the outer, which reach about to the tip of the perithecium, or may be longer. Perithecia 80–100 × 32–40 μ. Receptacle 90 μ. Appendages 75–110 μ. Total length to tip of perithecium 185–220 × 40–48 μ.

On legs and on the inferior surface of the abdomen of *Lebia* sp., Java; Rouyer, No. 1396. Closely resembling *L. curtipes* in general form.

Laboulbenia pusilla nov. sp.

Short, stout, pale yellowish. Perithecium free, straight, very slightly narrower distally, the distal portion, except externally, about the hyaline pore, deep black, the suffusion extending less than half way down externally, and about a third on the inner side: the distal end broad, flat, projecting on the inner side to form a rounded prominence; the pore lateral and external, hyaline, with adjacent paler shades; the black, slightly projecting area below it forming a more or less clean-cut line of demarcation. The receptacle short and stout; cells I and II subequal, as are also cells III and IV. Appendages as in *L. orientalis,* hyaline, the two basal cells partly overlapping and bearing each four to five branches four to five times branched, the cells distinguished by constrictions and blackish septa. Spores 45 × 5 μ. Perithecia 90 × 36–40 μ. Receptacle 100–110 μ. Total length to tip of perithecium 200 × 210 μ. Appendages 100–110 μ.

On inferior surface of *Brachinus scotomedes,* Japan; Berlin Museum, No. 994.

Laboulbenia rotundata nov. sp.

Perithecium deep brown, except below the tip; broadly rounded, the inner margin of the upper half free above the insertion-cells, and formed by a single long cell extending to the tip, somewhat as in *L. fallax*, and perhaps representing a marginal extension of the receptacle, as in that species. The tip blunt, with two minute inner tooth-like prominences of unequal size, the larger subtended by a narrow black suffusion, the whole tip more deeply suffused externally. Receptacle straight, elongate, tapering throughout to the base, the basal cell more deeply suffused distally, and protruding somewhat anteriorly below the subbasal cell, which is pale dirty yellowish-brown, inconspicuously granular-punctate: the distal portion dark dirty brown, the cell-boundaries hardly visible. The insertion cells small, giving rise to numerous (a dozen or more, for the most part broken in the type) primary slender clavate cells, from which closely septate short branchlets arise externally. Perithecium 185 × 65 μ, not including the marginal cell, which is 18 μ broad. Receptacle 360 μ. Appendages (broken) about 50 μ. Total length to tip of perithecium 450 μ.

On *Dineutes spinosus*, Java; Sharp Collection, No. 1086.

Laboulbenia Chaetophora nov. sp.

Perithecium dirty olive brown, straight, subconical; the upper two-thirds free, tapering from a broad base, the wall-cells with a distinct spiral twist, very slightly enlarged below the tip, which is slightly, but rather abruptly, distinguished, symmetrical, black, except distally; the apex rounded, and bearing an erect shorter, and an externally divergent, much longer, straight, black-brown, spine-like process. Receptacle broad, distally tapering to a slender base; the basal and subbasal cells about equal in length, dirty yellowish; cells III and VI about equal in length, much darker; the cells above them almost opaque, bulging externally below the insertion cells, which bear numerous short, rounded appendiculate cells, one or two of them larger and opaque; the branches numerous, the branchlets similar to those which in general characterize species of this section of the genus (mostly broken in the type). Perithecia 380 × 110 μ, the longer spine 40 μ. Receptacle 525 μ, or over. Total length to tip of perithecium 800 × 185 μ.

On the tip of abdomen of *Dineutes solitarius*, Madagascar (?); Sharp Collection, No. 1075.

Laboulbenia pallescens nov. nom.

Laboulbenia pallida Thaxter. Proc. Am. Acad. of Arts and Sci. xxxviii, p. 49.

By an oversight the preoccupied name *pallida* was used for this species, which occurs on species of *Clivina* in the Central American region.

Coreomyces curvatus nov. sp.

Nearly hyaline, or but faintly tinged with brownish. Receptacle becoming narrow toward the small basal cell, the two cells above the latter subequal in length, the appendiculate cells usually four, broader than long, subequal or the lower shorter. Stalk-cell of the perithecium relatively long, slightly or not at all inflated; the base of the perithecium often slightly inflated, the upper third or more bent abruptly outward, tapering to the blunt curved apex, the concave side of which is edged with amber-brown, the convex marked by slight indentations due to the prominence of the persistent wall-cells in this region. Appendages as in *L. Corisae*, for the most part distinctly shorter. Spores 55 × 4 μ. Perithecium 130–140 × 36 μ, its stalk-cell 70 × 25 μ. Total length, average, about 350–360 μ. Appendages about 125 μ.

On under side of margin of left elytron of two species of *Corisa*. Near Fresh Pond, Cambridge.

Ceratomyces falcifera nov. sp.

Allied to *C. furcatus*, hyaline, the inner margin of the perithecium and the base of the appendage suffused with amber-brown, becoming blackish and opaque below the appendage. External margin of the perithecium nearly straight, the inner strongly convex; the pointed tip curved to the base of the large, long sickle-shaped, external, subterminal, perithecial appendage, which consists of about twenty-five to thirty superposed cells, and is curved outward. Receptacle consisting of three superposed cells, surmounted by two cells from which the perithecium and antheridial appendage arise; the latter consisting of six or more cells, bearing branches like those of the other allied species on *Berosus*. Spores 55 × 4 μ. Perithecium 125–150 × 55–65 μ, its appendage 435–470 × 22 μ. Receptacle 90–110 × 35 μ. Appendage, without branches, 110–125 μ. Total length to tip of perithecium 250 μ.

On left inferior margin of abdomen of *Berosus* sp., Java; Rouyer, No. 1393.